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CLAIMS

1. A safety assembly for a hypodermic applicator set comprising a needle assembly including a needle seat from which a hollow needle extends, an elongate retractor which is mountable to the needle seat, a safety shield for housing the needle assembly slidably within a chamber defined therein and having a front end through which the needle is arranged to project and a rear open end through which the elongate retractor extends into mounting engagement with the needle seat, and at least one captivating formation carried on the shield, the needle assembly being slidably moveable in concert with the retractor from an extended administrable position in which the needle extends through the front end of the shield to a retracted position in which the needle is fully withdrawn into the chamber by the retractor to be held safely captive within the chamber by the captivating formation, the retractor being detachably mounted to the needle seat and being separable from the needle seat when in the retracted position.
2. A safety assembly according to claim 1 in which the retractor includes a pair of manually grippable outer caliper arms which are arranged to deform inwardly in response to finger pressure so as to frictionally engage an outer surface of the safety shield when the needle assembly is in the extended administrable position, and a central shaft or plunger which extends into the chamber and terminates in a needle seat engaging formation.
3. A safety assembly according to claim 2 in which the needle assembly and the retractor are in conjunction freely and axially slidable from the extended to the retracted positions, the caliper arms having an inner arcuate profile which corresponds to an outer arcuate profile of the safety shield.
4. A safety assembly according to either one of claims 2 or 3 in which a needle shield is fitted over the needle when in an extended position, the needle shield being mountable to a front end of the safety shield or retractor and including detent means for detaining the needle assembly in an extended stowed position prior to use.

5. A safety assembly according to claim 4 in which the needle shield and the retractor carry respective engaging and complementary engaging formations constituting the detent means for detachably engaging one another when the safety assembly is in the extended stowed position.
6. A safety assembly according to claim 5 in which the outer caliper arms terminate in the complementary engaging formations for engaging with engaging formations on the needle shield.
7. A safety assembly according to claim 6 in which the needle seat defines a viewing chamber for monitoring the ingress of fluid via the hollow needle, and fluid retaining filter insert means is mounted at a rear end of the viewing chamber, the filter insert means being held in position by the needle seat engaging formation at a front end of the plunger.
8. A safety assembly according to claim 7 in which the filter insert means comprises an air permeable filter disc which is mounted in a detent towards a rear end of the viewing chamber.
9. A safety assembly according to claim 8 in which the needle seat engaging formation comprises a balled end formation which is detachably engageable with a corresponding socket recess defined at a rear end of the viewing chamber, and at least one breather gap being defined between the balled end formation and the socket recess, with the combination of the air permeable filter disc and the breather gap providing an air escape path as fluid is introduced into the viewing chamber.
10. A safety assembly according to any one of the preceding claims in which the hypodermic applicator set is a hypodermic cannula set, the needle extends through a spigot defining a finger barrier at the front end of the safety shield, and a cannula or catheter tube is detachably mountable to the spigot.
11. A safety assembly according to claim 10 in which a sealing plug is located towards the front end of the chamber for preventing the leakage of fluid from the catheter tube into the chamber, the needle extending in use through the sealing

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plug in the extended position and being withdrawable back through the sealing plug to the retracted position in which the sharp end of the needle is seated rearwardly of the sealing plug, the sealing plug being arranged to reseal on withdrawal of the needle.

12. A safety assembly according to claim 11 in which the sealing plug serves as a front captivating formation for preventing the needle from escaping through the front end of the safety shield when in the retracted position.
13. A safety assembly according to any one of the preceding claims in which the captivating means comprises a retaining rib extending inwardly from a rear end of the shield, and a rearmost flange is formed at a rearmost end of the needle assembly, the flange forming a snug sliding fit with the inner wall surface of the safety shield and being provided with at least one breather gap for preventing the formation of a vacuum in that portion of the chamber between the needle assembly and the shield.
14. A method of manufacturing a safety assembly for a hypodermic applicator set comprising the steps of providing a safety shield having a front spigot end and a rear open end, fitting a catheter tube to the front spigot end of the safety shield, loading a needle assembly, which includes a needle projecting from a needle seat, through the rear open end of the shield, and driving the needle assembly into an extended position in which the needle extends through the catheter tube using a retractor having a central plunger or shaft which detachably engages a complementary formation at a rear end of the needle seat.
15. A method according to claim 14 which includes the further steps of fitting a needle shield over the needle and catheter, with a rear end of the needle shield detachably engaging a front end of the retractor.
16. A method according to either one of claims 14 or 15 in which the method includes the further steps of fitting a sealing disc to the needle by piercing a sheet of disc-forming material with the needle, and using the needle as a centering axis for punching or cutting out the sealing disc.

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17. A method according to claim 16 which includes the further step of locating the sealing disc towards the front end of a chamber defined within the safety shield for preventing the leakage of fluid from the catheter tube into the chamber once the needle is withdrawn into the retracted position.
18. A method according to any one of the preceding claims 14 to 17 in which the method includes the further step of punching a filter disc from a sheet of disc material, locating the filter disc within the needle seat, and retaining the filter disc in position within the needle seat by virtue of the engagement between the central plunger or shaft and the complementary formation at the rear end of the needle seat.
19. A method according to any one of claims 14 to 18 in which the assembly steps take place on a carousel having a plurality of stations, at which the various components are up- or downloaded.